

I. AMENDMENTS

Please amend Claims 1-9, and add Claims 10 and 11, as set out below.

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1. (currently amended) A method of using long range guided wave inspection techniques to detect ~~defects and~~ geometric ~~features~~ irregularities in a structure, comprising the steps of:

generating a first long range wave from a probe at a first probe position;

acquiring a first data set representing ~~of~~ reflection signals reflected from an irregularity to the ~~from a~~ first probe ~~position;~~

generating a second long range wave from a probe at a second probe position having a known separation from the first probe position;

acquiring a second data set representing ~~of~~ reflection signals reflected from the irregularity to the ~~from a~~ second probe position ~~having a known separation from the first probe position;~~

~~identifying signals in both sets of data whose amplitude exceeds a threshold value~~ peak signal values in the first data set and in the second data set, thereby obtaining a first set of peak signal values and a second set of peak signal values; associating each peak signal value with an occurrence time;

time-shifting ~~the identified signals in one set of data~~ one set of peak signal values by an amount that would cause the reflection signals to ~~occur~~ be received at the same time if the probes were in the same position;

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determining ~~a coincidence in time of the identified signals in both data sets~~ values in the shifted set of peak signal values and values in the unshifted set of peak signal values; and

interpreting coincident ~~signals values~~ as corresponding to ~~defects and geometric features~~ an irregularity in the structure along the shared path of the first and second long range waves.

2. (currently amended) The method of Claim 1, wherein the ~~data~~ first data set and the second data set are in the time domain.

3. (currently amended) The method of Claim 2, wherein the ~~data are~~ first data set and the second data set represent A-scan data.

4. (currently amended) The method of Claim 1, wherein the ~~data~~ first data set and the second data set are in the frequency domain.

5. (currently amended) The method of Claim 4, further comprising the step of converting the ~~data~~ first data set and the second data set to time domain data before performing the identifying step.

6. (currently amended) The method of Claim 1, wherein the identifying step is performed by defining a gate length, ~~incrementing the data values by the gate length, and within each gate length~~ selecting a maximum signal value within each of a series of gate lengths.

7. (currently amended) The method of Claim 1, wherein the determining step is performed by defining a time limit within which ~~two signals~~ both a value in the shifted set of peak signal values and a value in the unshifted set of peak signal values must occur.

8. (currently amended) The method of Claim 1, wherein the ~~determining step is performed by comparing~~ occurrence times correspond to ~~of~~ peak signal values ~~within each gate~~.

9. (currently amended) The method of Claim 1, wherein the ~~determining step is performed by comparing average~~ occurrence times ~~of values exceeding the threshold within each gate~~ are determined by the median time during which data values exceed a threshold.

10. (new) The method of Claim 1, wherein the probes are suitable for magnetostrictive testing.

11. (new) The method of Claim 1, wherein the probes are suitable for Lamb wave testing.

II. REMARKS

This Application has been carefully reviewed in light of the Office Action mailed January 10, 2003. At the time of the Office Action, Claims 1-9 were pending in this Application.

Rejections under 35 U.S.C. § 112

Claims 1-9 were rejected by the Examiner under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to